

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A multi-type air conditioner comprising:

an outdoor unit including a compressor, an outdoor heat exchanger, a flow path control valve that controls a flow path of a refrigerant from the compressor, and an outdoor unit piping system;

a plurality of indoor units each having an indoor expansion device, an indoor heat exchanger, and an indoor piping system;

a distributor that selectively distributes the refrigerant from the outdoor unit to the plurality of indoor units and from the plurality of indoor units to the outdoor unit according to respective operation modes; and

a noise preventor provided on respective pipelines connected to each of the indoor units and comprising a respective first valve connected to a respective open/close valve, the noise preventor being configured to cut off refrigerant flow to inoperative indoor units when the air conditioner is in operation, thereby preventing an occurrence of refrigerant flow noise at the inoperative indoor units; and

a bypass for the refrigerant in the pipeline connected to the indoor expansion device to bypass the inoperative indoor unit.

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2. (Previously Presented) The multi-type air conditioner as claimed in claim 1, wherein the first valve on a pipeline connected to the indoor heat exchanger is configured to cut off a supply of the refrigerant to the inoperative indoor unit.

3. (Previously Presented) The multi-type air conditioner as claimed in claim 1, wherein the noise preventor includes a second valve on a pipeline connected to the indoor expansion device configured to cut off a supply of the refrigerant to the inoperative indoor unit.

4. (Previously Presented) The multi-type air conditioner as claimed in claim 1, wherein the noise preventor includes the indoor expansion device which is configured to cut off refrigerant to the inoperative indoor unit.

5. (Previously Presented) The multi-type air conditioner as claimed in claim 2, wherein the noise preventor includes a second valve on a pipeline connected to the indoor expansion device that is configured to cut off refrigerant to the inoperative indoor unit.

6. (Previously Presented) The multi-type air conditioner as claimed in claim 2, wherein the noise preventor further comprises the indoor expansion device is configured to cut off refrigerant supply to the inoperative indoor unit.

7. (Canceled)

8. (Currently Amended) The multi-type air conditioner as claimed in claim 1 [[7]], wherein the bypass includes:

a bypass pipe connecting two pipelines that provide the refrigerant to flow in/out of each of the indoor units; and

a bypass valve configured to open/close a passageway in the bypass pipe.

9. (Original) The multi-type air conditioner as claimed in claim 8, wherein the bypass valve has a sectional flow passage area smaller than the flow sectional area of the bypass pipe, for bypassing minimum refrigerant.

10. (Previously Presented) The multi-type air conditioner as claimed in claim 1, wherein the flow path control valve includes:

a first port in communication with an outlet of the compressor,

a second port in communication with the outdoor heat exchanger,

a third port in communication with an inlet of the compressor, and

a fourth port blanked, or connected to a closed pipe piece.

11. (Previously Presented) The multi-type air conditioner as claimed in claim 10, wherein the outdoor piping system includes:

a first pipeline connected between the outlet of the compressor and the first port,

a second pipeline connected between the second port and the first port of the outdoor unit, the second pipeline comprising the outdoor heat exchanger,

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a third pipeline connected between the first pipeline and the second pipeline of the outdoor unit, and

a fourth pipeline connected between the third port and the inlet of the compressor, the fourth pipeline being connected to the third port of the outdoor unit.

12. (Original) The multi-type air conditioner as claimed in claim 11, wherein the outdoor unit further includes an accumulator on the fourth pipeline between the third port of the outdoor unit and the inlet of the compressor.

13. (Previously Presented) The multi-type air conditioner as claimed in claim 11, wherein the outdoor unit further includes:

a check valve provided on the second pipeline between the outdoor heat exchanger and the first port of the outdoor unit, and

an outdoor expansion device provided on the second pipeline and connected in parallel to the check valve.

14. (Previously Presented) The multi-type air conditioner as claimed in claim 13, wherein the check valve permits refrigerant flow from an outdoor heat exchanger side to a first port side.

15. (Previously Presented) The multi-type air conditioner as claimed in claim 11, wherein the first port of the outdoor unit is connected to the first port of the distributor,

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the second port of the outdoor unit is connected to the second port of the distributor, and the third port of the outdoor unit is connected to the third port of the distributor.

16. (Previously Presented) The multi-type air conditioner as claimed in claim 15, wherein the distributor includes:

a distributor piping system that guides refrigerant from the outdoor unit to the indoor units, and from the indoor units to the outdoor unit; and

a valve bank on the distributor piping system that controls the refrigerant flowing in the distributor piping system according to respective operation modes.

17. (Previously Presented) The multi-type air conditioner as claimed in claim 16, wherein the distributor piping system includes:

a liquid refrigerant pipeline comprising a first port of the distributor,

a plurality of liquid refrigerant branch pipelines branched from the liquid refrigerant pipeline and connected to each of the indoor unit expansion devices in the indoor units,

a gas refrigerant pipeline comprising a second port of the distributor,

a plurality of first gas refrigerant branch pipelines branched from the gas refrigerant pipeline and connected to each of the indoor heat exchangers of the indoor units,

a plurality of second gas refrigerant branch pipelines branched from the first gas refrigerant branch pipelines respectively, and

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a return pipeline connected to the second gas refrigerant pipelines and a third port of the distributor.

18. (Previously Presented) The multi-type air conditioner as claimed in claim 17, wherein the valve bank includes a plurality of open/close valves provided on the first and second gas refrigerant branch pipelines.

19. (Previously Presented) The multi-type air conditioner as claimed in claim 18, wherein the distributor further includes a liquefaction preventor that prevents liquefaction of the refrigerant discharged from the compressor and filled in the third pipeline.

20. (Previously Presented) The multi-type air conditioner as claimed in claim 19, wherein the liquefaction preventor includes:

a bypass pipe connected between the return pipeline and the gas refrigerant pipeline, and

a distributor expansion device connected to the bypass pipe.

21. (Previously Presented) A multi-type air conditioner comprising:

an outdoor unit having a compressor and an outdoor heat exchanger;

a plurality of indoor units in which each indoor unit is connected to the outdoor unit and each indoor unit comprises an indoor expansion device and an indoor heat exchanger;

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a noise preventor connected to respective indoor units and comprising a respective first valve connected to a respective open/close valve, the noise preventor being configured to cut off refrigerant flow to inoperative indoor units to prevent an occurrence of refrigerant flow noise at the inoperative indoor units; and

a bypass connected to each of the indoor units such that the refrigerant of the noise preventor is configured to bypass the inoperative indoor unit.

22. (Previously Presented) A multi-type air conditioner as claimed in claim 21, wherein the noise preventor includes:

the first valve connected to the indoor heat exchanger, the first valve being configured to cut off refrigerant flow to an inoperative indoor unit, and

a second valve on a pipeline connected to the indoor expansion device, the second valve being configured to cut off refrigerant flow to the inoperative indoor unit.

23. (Previously Presented) A multi-type air conditioner as claimed in claim 21, wherein the noise preventor includes:

the first valve on a pipeline connected to the indoor heat exchanger, the first valve being configured to cut off refrigerant flow to an inoperative indoor unit, and

an indoor expansion device having a closable system configured to cut off refrigerant flow to the inoperative indoor unit.

24. (Previously Presented) A multi-type air conditioner as claimed in claim 21, wherein the bypass includes:

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a bypass pipe connecting two pipelines such that the refrigerant is configured to flow in/out of each of the indoor units, and

a bypass valve on the bypass pipe configured for opening/closing the bypass pipe.

25. (Original) The multi-type air conditioner as claimed in claim 24, wherein the bypass valve has a sectional flow passage area smaller than the flow sectional area of the bypass pipe, for bypassing minimum refrigerant.